Serial No.: 10/532,364
Filed: April 20, 2005

Customer No.: 29,289
Attorney Docket 2002JP314D

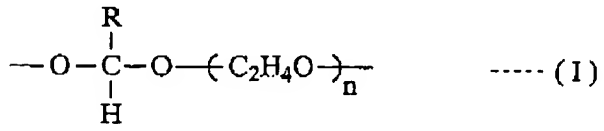
Complete set of claims

1(currently amended). A chemically amplified positive-working photosensitive resin composition, comprising (A) an alkali soluble novolak resin, (B) an alkali soluble acrylic resin, (C) an acetal compound, and (D) an acid generator further where the weight ratio of the components (A):(B):(C):(D) is 100 : (2 to 200) : (1 to 50) : (0.05 to 10).

2(currently amended). The chemically amplified positive-working photosensitive resin composition according to claim 1, wherein the acrylic resin contains a structural unit derived from (meth)acrylic acid and a structural unit derived from alkyl methacrylate, ~~as well as~~ and optionally a structural unit derived from styrene ~~as needed~~.

3(currently amended). The chemically amplified positive-working photosensitive resin composition according to claim 1, wherein the acrylic resin contains a structural unit derived from hydroxyalkyl methacrylate and a structural unit derived from alkyl methacrylate, ~~as well as~~ and optionally a structural unit derived from styrene ~~as needed~~.

4(previously amended). The chemically amplified positive-working photosensitive resin composition according to claim 1, wherein the acetal compound has a structural unit represented by the following general formula (I):



----- (I)

wherein R represents a saturated alkyl group having 1 to 20 carbon-atoms; and n is an integer of 1 to 10.

5(cancel).

6(currently amended). ~~The chemically amplified positive working photosensitive resin composition according to claim 1, wherein~~ A coated substrate comprising a coating of the chemically amplified positive-working photosensitive resin composition of claim 1 ~~is used for producing~~, wherein the coating has a film thickness ~~film~~ of 5 μm or more ~~in thickness~~.

7(currently amended). A process ~~comprising a cyan or non cyan electrolytic gold plating step in the gold bump forming process of the semiconductor packaging technology, and further~~ comprising imaging the chemically amplified positive-working photosensitive resin composition of claim 1 and forming a cyan or non cyan electrolytic gold plating layer.

8(currently amended). A process comprising ~~a copper-, nickel-, or solder plating step, and further comprising~~ imaging ~~of~~ the chemically amplified positive-working photosensitive resin composition of claim 1 and forming a plating layer selected from copper, nickel and solder.

9(currently amended). The process of claim 7 wherein the ~~chemically amplified positive working photosensitive resin composition is used in continuous plating steps~~ plating layer is a multilayer.

10(currently amended). The process of claim 8, wherein the ~~chemically amplified positive working photosensitive resin composition is used in continuous plating steps~~, the plating layer is a multilayer.

11(new). The process of claim 9, where the multilayer comprises a gold layer and at least one additional layer selected from copper, nickel and solder.

12(new). The process of claim 10, where the multilayer comprises at least one layer selected from copper, nickel and solder, and at least one additional layer comprising gold.